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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,762	07/13/2006	Kyle Patterson	SC12991CF	6202

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EXAMINER

JOHNSON, CONNIE P

ART UNIT	PAPER NUMBER
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1795

NOTIFICATION DATE	DELIVERY MODE
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08/21/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USADOCKETING@FREESCALE.COM

DETAILED ACTION

Response to Amendment

1. The remarks and amendment filed 5/8/2009 has been entered and fully considered.
2. Claims 1-8 and 10 are presented.
3. Claims 1, 4 and 10 are amended.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Switkes et al., American Vacuum Society in view of Oikawa et al., U.S. Patent No. 5,707,784.

Switkes teaches an immersion exposure method comprising contacting water as the immersion liquid, between the projection lens and the photoresist. The photoresist is then exposed to radiation and developed. Switkes does not teach a shield layer over the photoresist.

However, Oikawa teaches a photoresist composition comprising a substrate, photoresist and a cover layer applied thereon. The cover layer comprises an amorphous polyolefin that is high in transparency for the exposure wavelength, is nonpolar, has hydrophobicity, is superior in performance of the cover layer and does not pass

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impurities contained in the composition (col. 2, lines 57-67). The cover layer is also developable after exposure by conventional solvents, such as tetramethyl ammonium hydroxide (col. 6, lines 62-64). The cover layer of Oikawa is impervious to the immersion liquid (water) and would meet the limitations of the shield layer as claimed. Therefore, the resist composition of Switkes would benefit from the cover layer because the cover layer is not water-soluble. It would have been obvious to one of ordinary skill in the art to use the cover layer of Oikawa on the resist composition of Switkes to protect the resist from damage during exposure, improve performance of the resist composition as taught by Switkes and further, to improve pattern precision and resolution (col. 3, lines 7-8).

Response to Arguments

6. Applicant's arguments filed 5/8/2009 have been fully considered but they are not persuasive.

7. Applicant argues that Switkes nor Oikawa teach a shield layer formed of a material having pH dependent solubility.

Applicant is directed to col. 2, lines 57-67 of Oikawa wherein Oikawa teaches polyolefins that are not water-soluble in the cover layer. In addition, the polyolefin material is soluble in aqueous developer. Therefore, the polyolefin is a material having pH dependent solubility as claimed.

8. Applicant argues that Switkes does not teach a shield layer and that Oikawa does not teach a cover layer having a pH dependent solubility.

Although Switkes does not specifically teach a shielding layer on the photoresist, shielding layers are well known in the art to be used on photoresists in immersion

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lithography. Switkes teaches a photoresist for immersion lithography while Oikawa is relied upon for the teaching of a cover layer over a photoresist. Oikawa teaches that the cover layer comprises a water-insoluble polyolefin and is developable by aqueous solvents, such as tetramethylammonium hydroxide. Therefore, the cover layer is impervious to water. Therefore, the photoresist of Switkes would benefit from the cover layer of Oikawa because Switkes teaches a photoresist subjected to immersion lithography with water as the immersion fluid. By using the cover layer of Oikawa, the photoresist of Switkes is protected from damage during exposure, improve performance of the resist and improve pattern precision and resolution (col. 3, lines 7-8).

9. Applicant argues that Switkes nor Oikawa teach the limitation, "a shield layer (30) which is...over the top and sides of the photoresist layer" as stated in claim 6.

The cover layer of Oikawa is a liquid polymer (col. 3, lines 46-48). Therefore, it is expected that the cover layer would cover the top and sides of the photoresist, absent any evidence to the contrary.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

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advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CONNIE P. JOHNSON whose telephone number is (571)272-7758. The examiner can normally be reached on 7:30am-4:00pm Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Connie P. Johnson/
Examiner, Art Unit 1795

/Cynthia H Kelly/

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Supervisory Patent Examiner, Art Unit 1795